

## PREFORMS FOR FORMING MACHINED STRUCTURAL ASSEMBLIES

### ABSTRACT OF THE DISCLOSURE

A method of constructing a preform for use in forming a machined structural assembly is provided. The method includes determining the dimensions of the machined structural assembly. First and second structural members are selected based on the predetermined dimensions of the machined structural assembly. The first  
5 structural member is positioned adjacent the second structural member so as to define at least two contact surfaces. The contact surfaces of the first and second structural members are friction welded to construct the preform such that the preform has dimensions approximating the dimensions of the machined structural assembly to thereby reduce material waste when forming the machined structural assembly. A  
10 machined structural assembly having predetermined dimensions is formed from the preform by machining away excess material.

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